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HEARING TESTS IN SCHOOL CHILDREN.

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THE question of a standard hearing test for school children has long been a much-debated point, and the opinions expressed have showed considerable variation. Recently the Board of Education has laid down* the forced whisper test as the standard to be followed, and 20 ft. as the standard distance. For the sake of brevity, it may at once be said that no other tests than those of spoken and whispered speech are worth the time spent upon them in testing normal children, save in a very limited number of cases, and then only in the hands of expert specialists. Before discussing the forced whisper test, however, it is interesting to trace its evolution as a routine method in the Reports of the Chief Medical Officer of the Board of Education.

In that for 1908 occurs the following passage (p. 63): "Defective

* 'Ann. Rep. of Chief Med. Off.,' 1912, p. 47.

hearing is a relative term, and for this reason statistics as to its frequency are seldom comparable. It is not usually practicable during the routine examination of large numbers of children to test accurately the exact condition of the hearing capacity of a child, and, indeed, such a proceeding can hardly be said to be necessary." The Report goes on to condemn the watch as a test; and suggests that the forced whisper " is probably the most suitable one to adopt generally."

The 1909 Report (p. 47) remarks that: " As much attention as is found practicable to give should be devoted to the examination of the hearing," and deprecates the want of uniformity in the methods employed.

In 1910 (p. 46): " Adequate examination of the hearing of children was most unfortunately neglected " is the remark made—in striking contrast to the assertion, only two years earlier, that " such a proceeding can hardly be said to be necessary."

In 1911 (p. 42) the Report states with decision that: " In most areas the estimation of the degree of defect is not carried out with sufficient exactitude. The conditions for such an examination are sometimes not altogether favourable, but in many areas insufficient attention is being paid to the subject. With a little arrangement the 'forced whisper' test occupies but a very short time and fairly reliable results can be obtained."

From the work of the Report for Lancashire, Dr. Butterworth is quoted as classifying children as *very slightly deaf* when unable to hear the whisper at 20 ft., but beyond 6 ft.; *slightly deaf,* between 3 and 6 ft.; *hard of hearing,* no whisper at 3 ft., but ordinary voice from 6 ft.; and *very deaf children.* This classification is practically that which I suggested more than six years ago,* only that I gave the normal hearing of the child at from 20 to 25 *metres,* and not *feet.*

In 1912 (p. 47) the authoritative decision is enunciated that: " The practice of applying a hearing test to all children is not, as it should be, universally adopted, and the children who are omitted are not only infants but elder children as well. Many medical officers submit to a hearing test such children only as are notified by teacher and parents. . . . It is necessary, therefore, to emphasise the view that a suitable hearing test should be applied to every child inspected." The forced whisper test is again urged, with the remark that " It is important that the distance chosen should not be less than 20 ft."

* 'Public Health,' 1909, xxii, p. 256.

The Appendix of the Report (p. 413) contains the following return to be filled up:

Hearing (whisper)		20 ft. each ear (normal hearing)
	20 ft.	R.....
		L.....
	10 ft.	R.....
		L.....
	5 ft.	R.....
		L.....

Having from 1908 to 1912, a period of four years, executed a complete *volte face* upon the question of testing the hearing in school children, the chief medical officer preserves a discreet silence in his Report for 1913, except that the table just given is repeated on p. 363.

The Report for 1914, just issued, repeats the silence and the exception. The whole cycle of change is interesting to analyse, especially when expressed in such decided language. Beginning with the authoritative statement that defective hearing is a relative term and that it is not usually practicable to test accurately large numbers of children, and *that such a proceeding can hardly be said to be necessary*, the Board leaves that side of the fence (which is, in my opinion, the right side), sits upon the top rail for three years, and then, slipping over to the other side, contradicts itself flatly by stating that "the practice of applying a hearing test to all children is not, as it should be, universally adopted," viz., the practice which the Board has already declared, and in no hesitating language, to be impracticable and unnecessary! One has only to read these Reports at once to realise that, in the portions dealing with hearing tests, we are perusing the remarks of those who have no expert knowledge of the subject.

Having thus pointed out this remarkable change of opinion—a phenomenon not infrequent in Government Offices—we may now examine the facts and evidence which are at our disposal, and from which such deductions can be made as will guide us in deciding how best to detect defects of hearing in school children.

In 1898, Dr. James Kerr* tested 194 children in the playground of a quiet suburban school with the forced whisper. The children were approached along a chalk line marked in *metres* until they heard, numbers being used rather than words or sentences. The result is shown in the following table:

* 'Bradford School Board Triennial Report,' 1897–1900.

Age last birthday .	7	8	9	10	11	12	13	Total.
Numbers tested .	25	38	36	44	31	17	3	194
Excellent hearing (up to 20 metres) .	13	26	29	27	24	11	3	133
Fair hearing, 12 to 19	9	8	7	16	6	4	—	50
Poor hearing, less than 12 . .	3	4	—	1	1	2	—	11

From this it is seen that 61 out of 194, or 31·4 per cent., had defective hearing, but in only 11, or 5·6 per cent. was the defect marked.

Shermunski, of Petrograd,* examined 2221 school children (1318 boys and 903 girls), of ages varying from 7 to 11, by means of Politzer's test and whispered voice. He also obtained information from the parents and examined the ears and nasopharynx; 17·42 per cent. were subnormal (16·76 per cent. boys and 18·49 per cent. girls). The commonest cause was chronic middle-ear catarrh and Eustachian tube troubles (5·62 per cent.), then plugs of cerumen (4·09 per cent.), suppuration 4 per cent., results of suppuration 2·52 per cent. The home information showed only scarlatina as a cause, but by rhinoscopy 64 per cent. were ascertained to have originated in the nasopharynx. Shermunski considered that 80 per cent. of the cases were curable.

Barr, of Glasgow,† examined 600 children, and found that in each class of 50 are a dozen or more who hear badly, and who should always sit near the teacher. He suggested special "hard of hearing" classes.

Cheatle, of London,‡ examined 1000 children between the ages of 3 and 16 years and found 431, or 43·1 per cent., with normal hearing and ears free from disease.

Keller, of Cologne,§ objecting to the Prussian Minister's estimate of 2·18 per cent. as hard of hearing, gives the results of observers in different countries, which I have tabulated on page 133.

These statistics (all of which have been obtained by aural specialists of proved experience in their respective countries) will be sufficient to show the amount of hearing defect amongst school children. Taking the statistics of Kerr, Shermunski, Cheatle, Reichard, Weil, Sexton, and Bezold as the most representative, comprising 8063 children, they give a general percentage of 26·42 with defective hearing.

* 'Zeitschrift für Schulehygiene,' 1889, p. 105.
† *Ibid.*, 1889, p. 146.
‡ 'Trans. Otolog. Soc.,' 1902, iii, p. 74.
§ 'Zeitschrift für Schulehygiene,' 1888, p. 109.

Observer.	Number examined.	Number defective per cent.	Remarks.
Reichard (Riga)	1055	22·2	Watch test.
Weil (Stuttgart)	5905	10–30	Middle classes.
„ „	1105	32·03	Poorer classes.
Sexton (Washington)	570	13·0	
Moure (Bordeaux)	—	17·0	
Gellé (Paris)	—	22–25	
Bezold (Munich)	1918	25·8	heard third normal, of whom 11·3 per cent. heard 4–0 metres, instead of 25 metres.

It will be interesting now to note what percentage of children with defective hearing has been found under the new arrangements so curiously arrived at by the Board of Education, and, in examining the Reports of the different counties, it can, incidentally, be ascertained how the "unnecessary proceeding" of a universal standard test has been found to work.

In the Northampton County Report (1914, p. 20) it is stated that: "It is satisfactory to observe in the subjoined tables that the existence of ear disease and deafness was represented by less than 1 per cent. among both entrants and leavers in each case. . . . It should be noted that the forced whisper is used in the test for hearing at a distance of twenty feet for each ear for normal hearing."

Bedfordshire (Ann. Report, 1914, p. 29) gives results of 2033 children examined and 10·5 per cent. defective. Classified according to age, the percentages were:

	7–10.	10–12.	12–15.
Boys	9·8	9·5	10·4
Girls	7·5	19·6	9·8

In Stockport (Ann. Report, 1914, p. 16) the proportion of cases in which the hearing was found to be below normal was 4·7 per cent. in 1914, as compared with 2·7 per cent. the year before. "This does not show a true increase in the amount of defective hearing present among the children, but only that the uniform application of the forced whisper test has brought out a number of cases of slight defect of hearing which would otherwise have escaped detection."

In Kent (County Annual Report, 1914) 15,891 children were

examined, and the number with defective hearing was 535, or 3·37 per cent. The age incidence of those defective was :

Sex.	5		6		13		14	
	No. examined.	Defective.	No. examined.	Defective.	No. examined.	Defective.	No. examined.	Defective.
Boys	3518	0·76	938	1·59	3987	6·29	58	10·34
Girls	3256	0·92	929	1·29	3135	5·93	70	11·42

This table is instructive, since the percentages in the two groups of older children are in striking contrast with those of the younger children, and suggest that defective hearing must have been greatly neglected in former years.

In Durham (County Annual Report, 1914, p. 28) it is remarked that : " There has been much dispute about the scientific value of the test, but probably under favourable conditions it is quite a reliable one. As a matter of practical politics, however, it has been found to yield unsatisfactory results, chiefly on account of the impossibility of obtaining perfect quietness in the examining room—a condition essential to the success of the test."

In the Borough of Cambridge (Report, 1914, p. 25) it is stated that : " The hearing during the past six months has been tested by the forced whisper test in accordance with the instructions of the Board of Education. It is found in practice, however, that it is by no means so satisfactory as the stop watch, and has the additional objection of occupying considerably more time. One hundred and thirty-nine, or 7·6 per cent., were found to have defective hearing."

In the Tottenham Annual Report, 1914, p. 62, Dr. Kirkhope says, regarding the Board of Education forced whisper test : " Attempts to use it were abandoned in the case of infants as the results were entirely fallacious, and it was impossible to know whether lack of response was due to shyness or deafness. Examinations were often conducted in the teachers' rooms, where 20 feet is not available. . . . The test of acuity of hearing presented by the Board of Education is that a child shall hear distinctly a forced whisper at 20 feet."

The Sheffield Report for 1914 states (p. 21) that " systematic routine examination of hearing is quite impracticable in Sheffield schools."

The Surrey County Annual Report, 1914, gives a table (26 D) of hearing tests " in the new form proposed by the Board of Education as for eyesight " as follows :

Age group.		5–6.	8–9.	12–13.	13–14.	All ages.
Number examined		—	1662	6802	3139	11,603
20 ft. each ear		—	98·0	94·3	95·7	95·2
20 ft.	R.	—	0·1	1·0	0·7	0·8
	L.	—	0·2	1·2	0·9	1·0
10 ft.	R.	—	1·7	3·4	2.5	2·9
	L.	—	1·6	3·0	2.5	2·7
5 ft.	R.	—	0·1	1·0	0·7	0·8
	L.	—	0·2	1·0	0·5	0·8
Less than 5 ft.	R.	—	—	0·3	0·4	0·3
	L.	—	—	0·3	0·3	0·3

The Norfolk County Report, 1914, tabulates the results of the test thus:

		Entrants.	Leavers.	Other ages.	Total.
		6523	7143	3276	16,942
Whisper 20 ft. each ear		99·66	98·52	98·69	98·99
20 ft.	R.	0·03	0·20	—	0·09
	L.	0·09	0·18	0·09	0·13
10 ft.	R.	0·12	0·94	1·04	0·64
	L.	0·09	0·07	0·98	0·63
5 ft.	R.	0·18	0·35	0·27	0 27
	L.	0·14	0·34	0·24	0·25

In the Newport County Report for 1914 it is stated that the forced whisper test "of 20 ft. has been adopted this year, and will be continued in future. Previously to this year it was not used us a routine method, *but every child was tested in other ways and probably very few children who were deaf managed to escape detection*" (the italics are mine). It is considered, however, that it is useful to have a universal standard test, but, after commenting upon the difficulty of obtaining absolute quiet and sufficient space, and of allowing for stupidity and shyness, it is remarked that "in future children under six years will not be done, as it was found that a large number failed to respond satisfactorily, although their hearing was otherwise considered to be normal."

The Annual Report of the Lancashire County Council for 1914 is especially interesting. Some seven pages are devoted to defects of hearing, and there is an excellent exposition of the many difficulties in the way. Although these obstacles must be patent to all school medical officers of any experience, they are worth while enumerating in order to make this article complete. The Report remarks that "It has become apparent that the whisper test has its limitations,"

and that "It soon became evident that the performance of the tests was impracticable in many of the schools, for one or more of the following reasons"—noise in or outside the school; resonance peculiar to certain school-rooms. In other schools, in which reliable or moderately reliable results were obtainable, the sources of error in the whisper test are summarised, and this summary may be condensed thus:

(1) Difficulty of maintaining same pitch of whisper.
(2) Different inspectors use different loudness of whisper.
(3) Variation of ease with which different words can be heard.
(4) Variation of different children in recognising certain words.
(5) Nervousness of children.
(6) Fact that a whisper can be heard does not prove that phonated speech can be heard.

Two hundred children were tested, with results thus tabulated:

Distance.		Boys.	Girls.
20 ft., each ear normal		83	88
20 ft.	R.	6	2
	L.	5	6
10 ft.	R.	4	7
	L.	7	4
5 ft.	R.	3	2
	L.	4	1
Less than 5 ft.	R.	4	1
	L.	1	1
		100	100

It is pointed out that this table (which is practically that prescribed by the Board of Education) does not give a true representation of the effective hearing of the individual children tested. To show this, the following table is given:

	Boys.	Girls.
No. normal	83	88
No. defective in both ears	6	4
No. defective in one ear only	11	8
	100	100

This gives a percentage of 14·5 defective.

Out of the twelve Annual Reports mentioned above, no special comment is made upon the test by four (Northampton, Bedfordshire, Surrey and Norfolk); it appears to be regarded as satisfactory to two only (Stockport and Kent); whilst it appears to be considered

as unsatisfactory, unreliable or fallacious by six (Durham, Cambridge, Tottenham, Sheffield, Newport and Lancashire).

So far as one can ascertain from these reports, no results of a value commensurate with the time expended upon the test have been obtained. All that the new test has led to is a mass of undigested (and indigestible) statistics, many of which are probably fallacious and consequently unreliable, and none of which are of any scientific and practical value.

Given ideal conditions of application, the forced whisper test is theoretically the best and most scientific method of ascertaining defects of hearing in large numbers of children. But the conditions must be ideal, and this is precisely what they cannot be in ordinary school work. To yield reliable and accurate results, the room in which the testing is carried out must be spacious and quiet ; the child should be so placed as to avoid the possibility of the sound being reflected unduly into the ear ; the child should be intelligent and free from shyness, the whisper should be uniform and the words used should be intelligible (it is better to use numbers) ; lastly, the inspector and his satellites should possess unbounded patience and have plenty of time at their disposal. Even then there are other and more practical methods of detecting hearing defects in school children, so that testing under the ideal conditions just described is prodigal of time. In very few schools do there exist facilities for ideal testing by the forced whisper. Such test must further be based on normal hearing, which is from 20 to 25 *metres* and not feet. A metre being 1·196 yard, it is obvious that by taking 20 feet as the normal hearing for the forced whisper, an appreciable number of very early and slight defects must pass undetected, so that the Board of Education, in laying down a routine test with such confidence, has started with a fallacy ! In the face of this false start, one need not dwell upon the additional difficulties. A word as to the exact meaning of the forced whisper is, however, necessary, for experience has led me to realise that there are individuals whose idea of that test is the production of a sound which resembles rather the death-rattle of a despairing and infuriated bull elephant ; a bellow for which the normal limit is rather a thousand yards than twenty-five metres. The " forced whisper " is obtained by emptying the lungs of the tidal air and whispering with the supplemental air, whereby the column of air set in motion should always be the same for the individual and so should give a uniform whisper.

The failure of the new Board of Education test was a foregone conclusion, and—except that it has enforced upon School Medical

Officers the necessity for paying more attention to the detection of hearing defects amongst children—a useless one. This effect greatly compensates for its failure, since it makes for greater possibilities for the prevention of deafness. Had the Board of Education asked for advice from experts, failure could have been avoided.

But the most practical methods of detecting defects of hearing do not lie in cut and dried, uninteresting, routine tests, which weary or frighten the children and make sick the heart of the school doctor. To older children a modification of the forced whisper test might be applicable, but in the case of infants and younger children its use is farcical. The defective child can nearly always be detected by the teacher, if the latter is instructed how to do so. A suspected child should be tested to see whether he picks up his lessons properly, being placed near the teacher for that purpose if necessary. Mistakes in dictation or oral arithmetic are often due to bad hearing. Much valuable time would be saved if testing were made a *game*, as in France and some parts of the United States. In the former country, the game is known among the infants as the "*Leçon de Silence*," and the little ones are placed in a row at the bottom of the class and are called to come forward from time to time; those who fail to do so are noted and examined by the doctor. Simon remarks that "without being of absolute precision, this measure suffices to reveal those who have any defect of hearing."

In Chicago, a child whom the teacher suspects is placed in the back row of the class; then, in the course of the lesson, he is called by name. This method is applied to every child in the class in time.

Some such course as this might well replace the routine application, under great difficulties, of a set test by the school doctor. Scientific investigations of hearing are all very well in the hands of specialists for purposes of research or for application to children already found to be deaf, but their use for the detection of slight defects is comparable to the employment of the steam hammer for the cracking of a hazel nut.

NEPHRITIS WITHOUT ALBUMINURIA.*

By J. Porter Parkinson, M.D., M.R.C.P.,
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As far as I can discover not a single case of this variety of nephritis has as yet been reported before this Section, and it is

* A paper read before the Section for the Study of Disease in Children of the Royal Society of Medicine on January the 28th, 1916.

quite possible that many members, like myself, have not paid much attention to it. For that reason I thought it would be of interest to relate a case recently under my care in the wards of the Queen's Hospital for Children.

A boy, aged 3½ years, was admitted on November the 13th last year suffering from pneumonia. He had been ill for three weeks previously with cough and fever. The family history was unimportant. He had previously had pneumonia at the age of nine months. There were a few bronchitic *râles* scattered over the chest, and signs of consolidation in the left axilla. The temperature rose daily to 103° F. till it fell by crisis on November the 19th, after which it was normal.

The urine examined every third day showed nothing abnormal.

By November the 25th the chest was quite clear, and the boy to all appearances was well. On November the 27th slight œdema appeared on the face, and the next day the face was extremely swollen, as also were the arms, hands, feet and legs, and the wall of the trunk. There was no evidence of fluid in the chest or abdomen. From now the urine was examined daily, but no albumin was ever found. Microscopically a few granular and hyaline casts and an odd red corpuscle or two were found on centrifugalising. The amount of urine passed daily was normal, and fairly abundant urates were deposited on standing. On November the 29th the patient got very stupid, but not exactly drowsy. The blood-pressure on this date was 90 mm. By December the 1st the œdema had begun to disappear under hot-air baths and saline purgatives, and by December the 9th all casts and blood had disappeared from the urine, only a few epithelial cells from the bladder being seen on centrifugalising. The child was discharged on December the 18th in perfect health.

I believe this child to have had an attack of acute nephritis following but not due to pneumonia, causing œdema and the presence of casts and blood-cells in the urine, but without albuminuria.

What the cause was I do not know, but I do not think it was the pneumococcus, as in such cases I have usually seen severe hæmaturia and abundant organisms in the urine, which was not the case here. There was no sign leading one to suspect intestinal toxæmia, as the motions were regular, not offensive, and appeared normal.

The majority of cases of nephritis with œdema and without albuminuria seem to be the result of scarlet fever, and in fatal cases the kidneys show typical acute nephritis; but in my case there was no history of any acute specific or other cause except perhaps acute pneumonia. The absence of albuminuria has probably led to many

such cases being overlooked, in the absence of careful microscopic examination of the urine, and this, too, is rendered difficult and uncertain by the presence as a rule of a large deposit of urates. Henoch in his 'Lectures on Children's Diseases' records several cases, and says that in his opinion even casts may occasionally be absent from the urine.

Ballico in an article on albuminuria and nephritis in infancy, abstracted in the British Journal of Children's Diseases, 1906, iii, p. 163, states that out of seventy urines examined there were four which had no trace of albumin and showed renal cells and casts, and in two blood-cells also. These had no œdema nor any symptoms of nephritis whatsoever.

Herbst, in an article on "Latent Nephritis in Children," abstracted in the British Journal of Children's Diseases, 1908, v, p. 505, reports the examination of the urine of nine children between the ages of 8 and 14 years. Only one had a trace of albumin, and the urine was normal in appearance, quantity, and specific gravity. The sediment contained blood-corpuscles, hyaline, granular, and blood-casts. The clinical symptoms were only headache, pallor, and fatigue, but no œdema or heart complications or retinal changes. In 282 healthy children he found in 43 per cent. more or less the same elements, and so concludes that a few hyaline casts have no pathological significance, and the same with granular casts if in small numbers.

Herringham has reported a case ('Proc. Roy. Soc.,' 1909, ii, Clin. Sect., p. 55) of œdema without albuminuria, which he considered to be toxic, due to the same poison that is responsible for the œdema of nephritis.

It is possible that latent nephritis is much more frequent than is suspected, and as the matter has not previously been brought for discussion before this Section, I thought the case worthy of record, and it will, I hope, provoke some remarks on the subject.

Postscript.—In the subsequent discussion Dr. J. D. Rolleston stated that he had seen a very few cases of nephritis without albuminuria following scarlet fever, though he had seen very many cases of scarlatinal nephritis. In one case the existence of nephritis was verified by post-mortem examination. Dr. Rolleston stated that there had been comparatively little written on the subject in recent literature, whereas in earlier works, such as the classical textbook by Henoch, there was much more notice of it. Jaccoud, in an article on albuminuria ('Nouveau Dictionnaire de Médecine et de Chirurgie,' 1864, i, p. 547), quotes Philippe, of Berlin, who said he had sixty

patients affected with scarlatinal dropsy, in none of whose urines did he find albumin.

F. Léonetti, in his interesting thesis entitled "Souvenirs de Captivité : les Épidémies dans les Camps de Prisonniers d'Allemagne" ('Thèses de Paris,' 1914–5, No. 8), gives a description of various epidemics, and among others one of nephritis at the camp of Güstrow. "The English," he said "struck me by the fragility of their kidneys." They had been especially exposed to cold because they had been deprived of their overcoats and body linen. Although the existence of nephritis *a frigore* had been disputed, Léonetti had seen twenty cases among these English with all the symptoms of nephritis, and though in some of them the test-tube was solid with albumin on boiling, in others repeated examinations failed to show any albumin in the urine.

CASE OF DYSPITUITARISM IN A GIRL, AGED 15 YEARS.*

By Sydney Stephenson, C.M.,
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The girl was brought to the ophthalmic department of the Queen's Hospital for Children on July the 9th, 1914, with the complaint that the sight had been failing for three or four months, and that for one week she had suffered from headaches. Right vision, $\frac{5}{5}$ J.1.; left vision, $\frac{5}{36}$ J.1.; weak atropine drops (1 gr.) were prescribed, to be used to each eye three times a day, and when the girl was examined the following week she was found to have in the right eye +0·5D. cyl., axis 180°, and in the left eye +0·5D. sph. A note was made to the effect that the media were clear.

I first saw the patient on August the 27th, 1914, and found that the sight of the right eye had become reduced from normal to "shadows," while that of the left eye remained as it was on admission some seven weeks before—namely, $\frac{5}{36}$. The sight of the right eye was stated to have failed suddenly two weeks ago. The pupil of that eye had lost its direct response to light. The media were clear. Both optic discs were pale, but the retinal vessels were of normal dimensions. The girl's personal appearance was somewhat peculiar, since she was inclined to stoutness and her eyes seemed rather prominent.

* The case was shown at the Section for the Study of Disease in Children of the Royal Society of Medicine on January the 28th, 1916.

For closer observation the patient was admitted to the hospital on August the 27th, 1914, and remained until the following October the 24th. She was found to be a bright, intelligent, and good-natured girl, whose every movement appeared to be normal. There was no tremor or alteration in sensation. The facial movements were normal, and there was no nystagmus. The functions of all the cranial nerves, with the exception of the second, were normal. During her stay in hospital there were occasional headaches, but no vomiting or vertigo. Successive weights during the two months' stay in hospital were: 79 lb., 79 lb., 79 lb. 10 oz.; 81 lb., 80 lb. 4 oz., 80 lb. 8 oz., 80 lb., and 74 lb. 4 oz. The temperature was usually between 98° F. and 99° F.; but on thirteen occasions during her sojourn in hospital it rose to between 99° F. and 100° F.

An examination of the blood, conducted a few days after admission, gave the following results: Red blood corpuscles, 3,770,000; white blood corpuscles, 6400; hæmoglobin, 65 per cent.; index, 0·86. The differential count was: Neutrophiles, 55; basophiles, 1; eosinophiles, 2; large lymphocytes, 9; small lymphocytes, 29; hyaline, 4; total, 100.

The knee-jerks were brisk; there was slight ankle-clonus. Flexor plantar response. The abdominal reflexes were present; the reflexes of the upper arm were easily elicited. No jaw-jerk. No facial irritability. The Wassermann reaction negative as regards both the blood serum and the cerebro-spinal fluid. No increase of pressure in the cerebro-spinal fluid, which, from other points of view, was normal. The sphenoidal and other sinuses were reported as normal.

The girl was next seen by me on May the 13th, 1915, that is to say, after an interval of almost nine months, when sight remained much as it had been on the date of the last note. The optic discs were pale, with no evidences of antecedent neuritis. The retinal vessels were of good size. The field of vision of the right eye could not be taken, but that of the left eye, estimated for a small white object, was restricted in the temporal region, although tolerably full elsewhere.

Soon after this (June the 17th, 1915) a note was made to the effect that no pubic hair was present, and that the girl had not begun to menstruate. She was placed on thyroid, 1 gr. twice a day. A negative report was received at about this time respecting an X-ray examination of the patient's skull.

September the 9th, 1915: Right vision, perception of light; left vision, $\frac{3}{60}$. Dose of thyroid increased to 4 gr. a day.

October the 7th, 1915: Left vision, $\frac{3}{60}$, No. 20 J.

December the 4th, 1915: The bright and intelligent girl has a peculiar personal appearance, and is something more than merely well nourished. Her eyes convey the idea of prominence, and the left eye turns slightly outward and upward. Although within a few weeks of 15 years of age, no signs of menstruation have yet made their appearance. No headache, vomiting, or vertigo. Pupils 6·5 mm. in diameter. Direct action of the right eye almost lost, while that of the left one is as yet almost intact. A very slow hippus is present. The optic discs are pallid, well defined, and the physiological cups are not filled in or concealed in any way. Retinal vessels of good size. The visual field of the left eye, as tested for a 10 mm. white square, is entirely confined to the nasal half. The fixation point is as yet intact. Right vision, ? perception of light; left vision, $\frac{1}{24}$ (letters) and No. 18 J. (letters).

A report from Dr. Williams, radiographer to the Queen's Hospital, states: "The sella turcica is greatly enlarged, the antero-posterior diameter being 17 mm. There appears also to be some thinning of the clinoid processes."

Comments.—The diagnosis of "dyspituitarism" can now be made with tolerable confidence, seeing that the following points are present: (1) The existence of bilateral simple optic atrophy, otherwise unexplained; (2) loss of the temporal field in the left eye (temporal hemianopsia); (3) X-ray evidence of enlargement of the sella turcica; and (4) the general appearance of the girl. As to treatment, large doses of thyroid have been tried, but apparently without particular benefit. It would appear that nothing short of surgical treatment is likely to do good, a point upon which expressions of opinion are requested. The risk of impending blindness is, in itself, the justification for such a view.

RETROSPECT OF OTOLOGY, 1915.

By Macleod Yearsley, F.R.C.S.,
Senior Surgeon to the Royal Ear Hospital, etc.

The sudden outbreak of the European war has seriously affected the output of otological literature, and the contributions thereto are sparse (even in the prolific United States), and the majority not of great value.

No special addition has been made to our knowledge of the *anatomy and physiology* of the ear, and in *clinical investigation* the

only paper is that by Macleod Yearsley on "Hearing Tests in School Children," published in 'School Hygiene,' 1915, vi, 146, in which the inexpert endeavours of Government Offices to introduce a routine method of investigation, regardless of practical politics, is exposed.

As usual, *middle-ear suppuration* claims the attention of most writers, and the papers worth mention as repaying perusal are those of Emerson ('Boston Med. and Surg. Journ.,' clxxiii, 616), on "Acute Otitis Media in Infancy and Early Childhood: Avoidable Mistakes in Diagnosis, Prevention, and Treatment," which should be studied by otologists as well as general practitioners; Sawrey ('Med. Journ. of Australia,' i, 286), on "The Causation and Diagnosis of Suppurative Otitis"; Borden ('Ann. of Otology,' xxiv, 1), on "Systemic Infection of Middle Ear Origin in the Exanthemata"; Adam (British Journal of Children's Diseases, xii, 40), on "Infection of the Middle Ear with Vincent's Organisms," in which are described three cases—two boys, aged 6 years and 22 months respectively, and one girl, aged 8 years; and Sewell ('Med. Chronicle,' lxi, p. 49), on "Indications for Operative Interference in Cases of Aural Discharge."

The *complications of middle-ear suppuration* are illustrated by Kyle ('Ann. of Otology,' xxiv, 34), with some observations upon the modern mastoid operation; by Mollison ('Practitioner,' xcv, 489) on acute mastoiditis; by Broder ('Med. Record,' lxxxviii, 482) on primary mastoiditis; and by Pike ('Practitioner,' xcv, 501) on permeating mastoiditis.

Intracranial conditions are discussed by Ewing ('Med. Journ. of Australia,' i, 284) in a paper on "Difficulties of Diagnosis of Intracranial Extension of Suppurative Otitis," and one by Shuter (*Ibid.*, 281) dealing with the same subject.

The most noteworthy papers on *disease of the labyrinth* are two—Gordon Berry's case of a boy, aged 15 years, in whom labyrinthitis follows an operation for atresia ('Boston Med. and Surg. Journ.,' clxii, 700), and Weinstein's case of deafness following mumps in a boy, aged 8 years ('Med. Record,' lxxvii, 353).

Some work has been done towards the *prevention of deafness* during the year, the most important being that upon spotted fever; a useful paper on this subject is that by McIntosh and Bullock ('Lancet, ii, 1184), on "The Recognition and Isolation of the Meningococcus in the Nasopharynx of Cerebro-spinal Fever Contacts." Macleod Yearsley ('Practitioner,' xciv, 804) has discussed the preventive treatment of catarrhal deafness, and makes allusions in his paper to prevention in childhood.

Royal Society of Medicine.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, January the 28th, 1916.

The President, Dr. R. Hutchison, *in the Chair.*

Case of Dyspituitarism in a Girl, aged 15 years.—Dr. J. D. Rolleston (for Mr. Sydney Stephenson) *vide* p. 141.

Two Cases of Hypertrophic Cirrhosis of the Liver.—Dr. T. R. Whipham.—Case 1: A boy, aged 9 years, was brought to hospital on November the 24th, 1915, with a history of jaundice during the previous three weeks. He vomited at the onset of the jaundice, but had no further nausea until just before he was seen. For some time he had been getting thinner and had lost his appetite and spirits. The urine had been dark coloured and the motions light "like putty." There was one younger brother in the family, who is healthy, and between him and the patient the mother had had one miscarriage. When first seen the boy was well nourished and presented a general icterus of moderate severity. There was no irritation of the skin and the pulse was not diminished in frequency. The liver was greatly enlarged, extending to within 1¼ in. from the umbilicus, and was firm and uniform to the touch. There was no enlargement of the spleen or of the lymphatic glands. The thoracic viscera were normal. A blood count showed red corpuscles 4,500,000, white cells 6000 per cubic millimetre; the hæmoglobin value was 100 per cent. The urine contained much bile-pigment, and the bowels were constipated. The Wassermann reaction was negative. Treatment with calomel and salines brought about a gradual diminution in the jaundice, and at the present time no colouration was visible The liver, however, remained approximately the same size.

Case 2: A boy, aged 6 years, attended hospital on January the 10th, 1916, on account of jaundice of ten days' duration. He was said to have been getting thinner and to have lost his appetite. He had had no pain, but had vomited once on January the 9th. The urine had been of a dark colour, but, according to the mother's definite statement, bile had never been entirely absent from the stools. The patient had one brother who was healthy, and there had been no miscarriages. The boy showed marked icterus of a deep yellow colour, rather more intense than that in Case 1. He had no itching of the skin and the pulse was not slow. The liver was very similar to that of the first case, but was a trifle larger in proportion, the lower edge being felt within ¾ in. from the umbilicus. In this case also there was no enlargement of the spleen nor of the lymphatic glands, nor any abnormality in the thoracic organs. The blood count likewise resembled that in the former case, the red corpuscles numbering 4,500,000 and the leucocytes 10,000 per cubic millimetre, while the hæmoglobin value was also 100 per cent. The urine was deeply pigmented with bile, but the fæces have not been observed. The Wassermann reaction negative. The patient has been treated with calomel, but the deep jaundice still persisted and the liver had not altered in size.

Case of Papillomatous Growths in Old Operation Scar.—Dr. J. L. Bunch.—A boy, aged 13 years, was operated on eight years ago for a fatty tumour on the left side of the chest. Some months after the scar had healed small reddish growths began to appear on and around the scar, and such growths have recurred intermittently ever since. There were now about a dozen of these growths, which were soft, sessile, and red to purplish in tint. Under the microscope they had a definite papillomatous character, with a well-marked cortex. No tubercle bacilli had been found in them, and von Pirquet's reaction was negative. There was nothing abnormal in the lungs.

Multiple Tumours of Molluscum Contagiosum.—Dr. J. L. Bunch.—A girl, aged 13 years, had a number of typical molluscum contagiosum tumours on both arms. One or two had undergone degeneration. They had been present about a month.

Case of Chronic Patchy Dermatitis.—Dr. J. L. Bunch.—A girl, aged 11 months, had a number of scattered erythematous patches on the trunk and thighs. These patches appeared soon after birth, the first one being on the side of the neck, and had gradually increased in numbers. No patch which had once made its appearance disappeared again, but after some weeks or months it developed a yellow tint which persisted. No patch was definitely scaly, but some of the earliest ones showed a slight roughness of the skin, the recent patches being quite smooth.

Double Optic Neuritis.—Dr. C. O. Hawthorne showed a girl, aged 7 years. She enjoyed usual good health until Christmas, when she vomited on two or three occasions in the early morning and before breakfast; also some complaint of headache, but she was never regarded by mother as in any sense seriously ill. As the vomiting was repeated on several occasions, the doctor advised admission to hospital. She was bright and cheerful, and made little or no complaint; double optic neuritis was marked but there was no other evidence of nervous disease, though a degree of alternating convergent squint; vision $\frac{6}{6}$ each eye. Cerebro-spinal fluid negative; Wassermann test (?). No evidence of visceral disease.

Case of Solid Œdema.—Dr. C. O. Hawthorne.—A girl, aged 15 years, six years ago fell and cut her left leg below the knee; the limb became red and inflamed, and she was confined to bed for a month. Two years later the limb was noticed to be swollen, and this condition had persisted, or even increased, to the present date. There was pitting on pressure over the dorsum of the left foot, and the soft tissues of the left leg and of the lower thigh were thickened, but without evidence of dropsy. The left calf had a circumference greater than the right by $2\frac{1}{2}$ in., while 5 in. above the upper border of the patella the left thigh measured $19\frac{1}{2}$ in., and the right $16\frac{1}{4}$ in. The limbs were of equal length, and skiagrams showed nothing abnormal in the left tibia or fibula.

Cardiac Case for Prognosis.—Dr. Thursfield.—A girl, aged 13 years, had had four attacks of chorea: the first in 1912, the last in May, 1915. She now had her cardiac impulse 1 in. outside the left nipple line, with some dilatation of the right side, and systolic and early diastolic murmurs. The chief feature of the case, however, was the pulse irregularity, which varied considerably, but was, according to the electrocardiogram, due to ectopic

contractions of the right ventricle. The cardiac affection did not seem to have checked her growth. She now weighed 7 st. 11 lb. in her clothes, and was unusually muscular and big for her age.

Tumours over Manubrium and in Left Calf.—Dr. Cautley showed a male infant, aged 15 months, whose mother had died twelve months ago from tuberculosis.

Heart showing Infiltration by Large Round-celled Sarcoma probably originating in the Sternal Periosteum.—Dr. E. C. Williams (*vide* p. 114).

Congenital Double Hydro-ureter.—Dr. Eric Pritchard.—A girl, aged 12 years, was admitted to the Queen's Hospital for incontinence of urine and ingravescent drowsiness. She appears to have had good health till within a year of admission, when symptoms of incontinence commenced. Four days before admission pus was discovered in the urine with albuminuria, and the child complained of a sensation of cold down the back.

On admission she was in a comatose condition and breathing was slightly stertorous. There was a large, rounded swelling in the abdomen, which extended to the umbilicus. She had a strong smell of urine, and incontinence was continuous. The temperature was normal, the pulse and respirations regular; the blood tension was 125 mm. Hg. The fundi were normal. The urine contained a large amount of pus, with a large number of staphylococci and a few coli bacilli. The uræmic symptoms gradually increased, and she died four days after admission.

Post mortem both ureters were greatly enlarged, with double hydronephrosis; on being opened they were found to be full of thickly purulent urine. The kidney substance was reduced to a shell, and the ureteral openings of the ureters into the bladder were greatly stenosed. The bladder was enlarged and the walls hypertrophied; the urethral orifice appeared normal.

The interest of the case lay in the fact that the child enjoyed good health until the age of 11 years, that the bladder was hypertrophied and enlarged without apparent cause, and that the infection which finally brought about the end was a staphylococcic one, without giving rise to a temperature.

Nephritis without Albuminuria.—Dr. J. Porter Parkinson (*vide* p. 138).

DERMATOLOGICAL SECTION.

October the 21st, 1915.

Case of Lymphangioma.—Dr. Dudley Corbett.—The patient was a female child, aged 12 months. There was one other child in the family, a boy, aged 4 years, without blemish, nor was there any history which could be connected with the case. The child was perfectly healthy and experienced no inconvenience from the tumour, nor had there been any attacks of inflammation associated with it. The lymphatic glands were not enlarged anywhere. The tumour itself dated from birth, and the parents did not

think that it had grown at all. It was situated in the left leg, extending from the middle of the thigh to the ankle, and rendering that limb notably larger than its fellow; even the left thigh above the tumour was thicker than that on the right. At its upper part, over an area the size of the palm of the hand, was a nævoid patch, which faded on pressure. Over it were scattered numerous dark blue venous tufts of varying size. Some showed signs of recent hæmorrhage and some were quite hard to the touch, like an angiokeratoma. Besides these venous tufts were a few transparent vesicles, containing a clear fluid, which flattened on pressure, only to fill up again when the pressure was removed. Similar vesicles were present all over the tumour, some quite clear, and some just tinged with red. In the calf of the leg the tumour was very bulky, and when grasped gave the sensation of a bundle of varices, though this point was not quite so marked as it was when the child first came under treatment. There was no tenderness anywhere.

The mother stated that the little venous tufts frequently bled, and the vesicles also exuded a clear fluid, but there was never any prolonged bleeding nor much leakage from the vesicles. The tumour never varied in size during the day, nor was its fluid content affected by gravity. Clinically the case seemed to be one of lymphangioma circumscriptum associated with hæmangioma. From the literature it appeared unusual to find one of such great bulk.

Large doses of radium were being applied, and as a result the tumour seemed to be much less tense than it was, and the nævoid patch was paler in colour.

Angiokeratoma.—Dr. W. Knowsley Sibley.—The patient was a fairly healthy-looking girl, aged 12 years, who had for many years suffered from chilblains on the hands and feet. Ever since she was three years old nævus-like puncta had been gradually appearing on the fingers and toes. The eruption was stated to have commenced on the outer side of the little fingers and the small toes. Of recent years the lesions had become more prominent, and some on the toes, especially those which had appeared on the adjacent surfaces of the dorsal aspect of some of the toes, had become hard and warty in appearance and feel. At times the lesions were slightly painful with a pricking sensation, and they occasionally bled. They varied in size, from that of a pin's head to that of a small pea, occurring singly and in groups scattered over the dorsal surface of all the fingers, and especially on the toes, and were persistent.

A section of one of the lesions from the right big toe revealed a thickening of the stratum corneum and the stratum Malpighii, with large cavernous spaces filled with blood corpuscles in the rete, together with a dilatation of the papillary and other blood-vessels.

Case of Lichenoid and Nodular Tuberculide.—Dr. H. W. Barber.—The patient was a boy, aged $4\frac{3}{4}$ years. The condition had already lasted for six months. The child had been fed in infancy on Nestlé's milk and barley-water. The father had died from perforated gastric ulcer, but had previously been healthy. The child's mother and one brother were both healthy. In February, 1915, the patient had measles, followed by bronchitis, and some weeks later the eruption appeared on the hands and knees, and afterwards on the trunk. He had lately had a brassy cough, and the physical signs in his chest indicated pressure on the left bronchus with fibrosis and collapse of the left lung—presumably from caseous bronchial

glands. The lesions on the trunk were lichenoid, and those on the hands and knees nodular.

Case of Granulosis rubra nasi.—Dr. A. Winkelried Williams.—The patient, a girl, aged 13 years, had suffered from the condition since early childhood. Her nose was red and the skin wet with sweat. There were hyperidrosis and lumpy swellings (sweat gland abscesses) in the armpits. The hands and feet were cold and moist. The localised hyperidrosis of the cartilaginous parts of the nose was very marked until about two months ago. A few deep-seated papules under the diascope gave the appearance of something between a hydrocystoma and lupus. The patient was now much better, in fact she was getting towards the age when recovery usually took place.

Abstracts from Current Literature.

Otology, Rhinology and Laryngology.

Acute otitis media in infancy and early childhood: avoidable mistakes in diagnosis, prevention, treatment (*'Boston Med. and Surg. Journ.*, 1915, clxxiii, *p.* 616).—**W. R. P. Emerson** gives five cases of acute otitis in children of ages ranging from 2 to 2¾ years. He considers the condition the most frequently overlooked affection of infancy and childhood, reasons for which statement are set forth. In none of the five cases were there symptoms of earache. The author concludes that in every case of contagious disease and of affections of the respiratory tract in children, measures should be inaugurated at once to keep the naso-pharynx clear, and so maintain drainage through the Eustachian tube. In such cases the ear drum should be inspected at every visit of the physician to his patient. In cases of otitis media, when the symptoms and the local condition do not improve under treatment, the drum should be incised by the aurist, without waiting for bulging or pus. Every child, after an attack of acute otitis media, should have his epipharynx examined and treated by a specialist trained to recognise the close relation of the naso-pharynx to the ear. [These suggestions may be stigmatised as ancient history, but our experience is that they cannot be too often insisted upon.]

Macleod Yearsley.

A case of broncho-pneumonia, purulent otitis media and interna, and lepto-meningitis (*'Edin. Med. Journ.,'* 1915, ii, *p.* 265).—**J. Thomson** and **J. S. Fraser** report this case in a female infant, aged 1 year and 8 months, who was admitted to hospital with symptoms of meningitis which had lasted for six days. Death occurred two days later, or eight days after the onset of the meningitic symptoms. The chief points made out at the post-mortem examination were old hip-joint disease, probably tuberculous in nature, pneumococcal meningitis, and toxic changes in the organs. A detailed account of the microscopic examination of the left ear is given, the principal points regarding which may be summarised as follows: Purulent otitis media, not very advanced, only the inner layer of the tympanic membrane being involved. No sign of involvement of the fibrous layer or of impending rupture of the drum head. On the other hand, the niches of the

oval and round windows showed pus, and the membrane closing the round window was especially infiltrated. Labyrinth inflammation also in early stage, *i. e.* serous stage, just passing into purulent. Pus most evident in the basal coil of the cochlea in the region of the round window, whereas the exudate in the vestibule on the inner side of the stapes mainly fibrinous. Pus filling the cochlear opening of the perilymphatic duct; cochlear canal itself collapsed. Hæmorrhage in the narrow spaces surrounding the labyrinth capsule, probably a toxic change. J. Allan.

Chronic suppurative otitis media with complications ('*Edin. Med. Journ.*,' 1915, II, *p.* 356).—**J. S. Fraser** and **W. R. Logan.**—A girl, aged 13 years, had a foul-smelling discharge from the right ear since an attack of measles some years ago. Six days before admission to hospital she complained of great pain in the right ear, followed by vomiting and retraction of the head. There was no history of rigors. When the patient was admitted the symptoms and signs of purulent lepto-meningitis predominated, and lumbar puncture confirmed this diagnosis. The radical mastoid operation was performed, and a large extra-dural perisinus abscess drained. Within a week the symptoms of lepto-meningitis had almost entirely passed off and the cerebro-spinal fluid had become clear. After the patient had been one week in hospital, when the signs of meningitis were rapidly receding, symptoms suggestive of cerebellar abscess on the diseased side became prominent—*e. g.* the child lay curled up in bed, there was stiffness of neck, the head was supported by the hands, the grasp was feeble on the ipso-lateral side, dysdiadokokinesia was present, along with spontaneous nystagmus to the affected side. There were, in addition, symptoms of an otitic venous infection—evening rise of temperature to 104° F. Suddenly the signs of the venous infection became still more prominent; there was a marked rigor. A second operation performed at this time showed that the lower part of the sigmoid sinus, jugular bulb, and upper part of the internal jugular vein were thrombosed. Immediately after the venous infection had been dealt with, the signs of a right-sided cerebellar abscess again asserted themselves—extraordinary nystagmus, pointing error, vomiting, etc. At this time also symptoms of gangrene of the lung supervened, evidently the result of a septic infarct. The child began to spit up extremely offensive brownish-red material, which was always more profuse when she turned on her left side to have the wound behind the right ear dressed. Functional examination of the right labyrinth at this stage showed that it was still active, as the patient was able to hear with the noise apparatus occupying the attention of the sound ear, while the vestibular apparatus on the diseased side reacted to the caloric test. As the signs of cerebellar abscess continued, the dura covering the right lateral lobe of the cerebellum was incised, and a stinking abscess evacuated. From this point onward the patient made a slow recovery. She was seen two months after her discharge, and was then looking fat and well. She had gained enormously in weight. She could walk well, and had no difficulty in balancing. J. Allan.

Meningeal syndrome of otitic origin ('*Rev. méd. del Uruguay*,' 1915, XVIII, p. 399).—**P. E. Duprat** records twenty-two cases in children, all of whom were infants under 2 years, except three aged from 6 to 10 years. Acute otitis in infancy may be fairly frequently latent, *i. e.* without any local signs, and only be revealed by symptoms of repercussion, a frequent example of which is a meningeal syndrome. The normal character of the cerebro-

spinal fluid in such cases, as well as the success of puncture of the tympanum, allows one to exclude meningitis and to recognise the existence of a toxic reaction originating in the middle ear. To produce this meningeal syndrome it is not necessary for the ear infection to have reached the suppurative stage. On the contrary, the stage of congestion preceding suppuration is more favourable for the development of meningism. From the exclusively meningeal aspect the prognosis is favourable, but this prognosis is independent of the gravity of the otitis, which, as a general rule, is also favourable. One should always think of the possibility of latent acute otitis, so as to avoid serious consequences, since what was at first only meningism may develop into a true meningitis. In exceptional cases latent otitis with similar symptoms may develop in older children. J. D. Rolleston.

Primary mastoiditis (*'Med. Record,'* 1915, lxxxviii, *p.* 482).—**C. B. Broder** describes two cases of primary mastoiditis, one in a child, aged 3 months, the other in one aged 7 years. In the first, a mastoid abscess developed after a sharp blow on the left side of the head, with complete absence of local evidence of middle-ear disease. In the second case, with a history of frequent attacks of tonsillitis and chorea, there was a general destructive mastoiditis, with necrosis involving the tip, zygomatic and perisinus cells. The infection probably originated in the tonsil and passed to the mastoid without involving the Eustachian tube and middle-ear, which were cut off from the tympanum by inflammatory closure of the aditus.

Macleod Yearsley.

Severely impaired audition in childhood (*'Med. Record,'* 1915, lxxxviii, *p.* 1089).—**L. M. Hubby** discusses deaf-mutism, but without any original observations. His expressed opinions are, however, sound, and he urges the avoidance of intermarriage of the congenitally deaf.

Macleod Yearsley.

The indications for operative interference in cases of aural discharge (*'Med. Chronicle,'* 1915, lxi, *p.* 49).—**D. L. Sewell** thus summarises the signs and symptoms which singly or severally call for interference: (1) A discharge which persists in spite of treatment. (2) A discharge which is fœtid, blood-stained or contains cholesteatomatous material. (3) Recurring polypi. (4) Carious bone. (5) Fistulæ. (6) Pain. (7) Tenderness. (8) Headache. (9) Vertigo with or without nystagmus. (10) Increase of deafness with diminished bone conduction. (11) Facial paralysis.

Macleod Yearsley.

How to blow the nose (*'Med. Record,'* 1915, lxxxviii, *p.* 1007).—**E. H. Griffin** complains that in thirty years' experience he has not seen twenty-five persons who knew how to blow their noses properly unless they had been previously taught. Failure to clean the nose thoroughly is responsible for over 75 per cent. of catarrh cases. He suggests that to blow the nose properly it is best to look at it as a double shot-gun: the nose as the muzzle, the chest as the air receiver, the mucus in the nose as bullets and charge. "A deep inspiration to fill the chest with air, then one finger is placed upon the ala of one nostril to obstruct the passage. With one violent expiration the air from the chest is forced through the open chamber of the nose and the offending discharge is caught by the handkerchief. This manœuvre is repeated on the opposite side." This is Griffin's advice; in some cases it may be dangerous. Macleod Yearsley.

Milk-borne septic sore throat—a new health problem (*'Med. Record,'* 1915, LXXXVIII, *p.* 945).—**Hermann Biggs** discusses these outbreaks. Previous to the Boston epidemic in 1911, no outbreaks had been reported in the United States. They were, however, not uncommon in Great Britain, ten epidemics occurring from 1880 to 1905. The author discusses the causation and bacteriology in detail, and states that it is quite clear that the only means of prevention lies in universal Pasteurisation of the milk supply for drinking purposes. The milk may be infected primarily in the cow, or secondarily from someone handling the milk. It is also possible that mastitis may be produced in the cow by transmission to the udder from a human being. Of course, also, the disease is transmissible from patient to patient. MACLEOD YEARSLEY.

Tonsils and chronic cervical adenitis (*'Lancet,'* 1915, II, *p.* 752).—**H. Gardiner** carried out an investigation with the idea of determining what, if any, evidence there was bacteriologically of the infectivity of the tonsils in cases of chronic cervical adenitis in which there was no apparent and obvious source of infection. His conclusions are as follows: (1) In the majority of cases (80 per cent.) of chronic cervical adenitis where no obvious source of infection is present, the tonsils are infected. (2) The size of the tonsils makes no difference to their infectivity except that the small fibrotic variety is likely to be more dangerous than the large. (3) The number of cases in which turbercle bacilli are present is relatively small, but is larger than in simple cases of enlarged tonsils. (4) The frequent presence of other organisms than the tubercle bacillus in these cases suggests that a larger proportion of the so-called chronic tuberculous glands are in reality chronic septic glands. (5) The organisms are present in the deepest parts of the gland, and are therefore only removed by operations involving complete enucleation. J. ALLAN.

Tonsillar abscess in diphtheria (*'Zeitschr. f. Hyg.,'* 1915, LXXX, *p.* 163).—**A. V. Knack.**—This is usually a very rare complication. Reiche met with only one example among 8000 cases of diphtheria. Knack records eight cases—*i. e.* 1·6 per cent.—among 500 diphtheria patients. Three were children aged from 13 to 15, and the rest adults. In two cases the abscess was concurrent with diphtheria, and in the rest there was an interval between the two varying from three to twelve days. Four of the patients had already had repeated attacks of tonsillitis. In six of the cases examined bacteriologically, there was a mixed infection with streptococci. All recovered. Six had slight albuminuria and two palatal palsy.
J. D. ROLLESTON.

The tonsillar manifestations in the early diagnosis of measles (*'Am. Journ. Dis. Child.,'* 1915, X, *p.* 274).—**C. Herrman,** after referring to his recent paper on measles (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1915, XII, *p.* 246), states that he has now notes on 88 cases of measles in an early stage. In 80 cases (90 per cent.) Koplik's spots were seen, and in 35 cases (40 per cent.) the tonsillar spots were present. These vary in number, size, shape, and colour. They may be only 2 or 3, or 20 or 30. Their size varies from a point to a pin's head; they may be round, or very small regular, or larger irregular, streaks. The colour varies from a bluish-grey to white. They are seen only in a very early stage of the disease, often when the child has no objective symptom except a slight rise

of temperature, and are visible one or two, or occasionally three, days. They are more frequently seen in enlarged or succulent tonsils.

J. D. Rolleston.

The Connellan-King diplococci in affections of the throat, with special reference to rheumatism (*'Med. Record,'* 1915, lxxxviii, *p.* 958).—**J. J. King**, in a very interesting paper, points out that (1) Every case of septic arthritis, commonly called rheumatism, is caused by a focus of infection somewhere in the body. It may be in tonsils, ear, accessory sinuses, gastro-enteric tract, genito-urinary tract, or in the teeth. (2) The most frequent focus is found in the mouth, and especially in the tonsil. (3) A very simple tonsillitis may be followed by complications so serious as to endanger life. (4) The infection may be latent, and produce serious trouble weeks or months later at a distance from its original site. (5) The danger of general sepsis after tonsillectomy should be eliminated by autogenous vaccines before operation. (6) Complications are caused by chemical toxins rather than by a bacteriæmia. (7) The blood changes seem to be in the Connellan-King diplococci infections a simple anæmia, and in a few cases a slight increase in the eosinophiles 4–6 per cent. (8) Autogenous vaccines give highly satisfactory results. Macleod Yearsley.

Some clinical manifestations of focal infections (*'Journ. Amer. Med. Assoc.,'* 1915, lxv, *p.* 1911).—**S. Oftedal** reports the following cases to illustrate the importance of searching for focal infections. Case 1: A boy, aged 12 years, had been suffering for several years with chorea, which, in spite of the usual treatment, rest in bed, Fowler's solution, etc., had been growing more and more severe. The eyes were continually rolling from side to side, the head was always changing position, and other muscles of the body were jerking constantly. General nutrition was poor; there was a slight mitral lesion, and a rather indefinite history of sore throat. Tonsils were of the embedded variety and apparently not enlarged. Examination was otherwise negative. The tonsils were extirpated, and the left was found to contain pus from which a streptococcus was isolated. The boy was put to bed, Fowler's solution being prescribed in increasing doses. In five weeks twitchings had all ceased, and patient seemed to have made a perfect recovery.—Case 2: A girl, aged 13 years, had been subject to attacks of tonsillitis for several years. About a year ago one of these attacks was associated with rheumatic pains and swelling of the joints, which, however, subsided, being followed by several other severer attacks at intervals until about seven weeks ago, when she entered the hospital. At that time the child was greatly emaciated, and had the typical appearance and symptoms of a severe endocarditis. The tonsils appeared to be innocent, being of apparently normal size and colour. For several weeks the temperature ranged between 102° and 104° F., salicylates and other medication being given without any apparent effect. A bacteriological examination was then made of the tonsils. From the crypts of the left tonsil was obtained a slight amount of pus, which yielded a pure culture of a green-producing streptococcus under anærobic cultivation. It was decided that the tonsils must be removed, in spite of the poor condition of the patient. Under local anæsthesia this was successfully accomplished. Both tonsils were of the size of a large hazelnut; the right was apparently normal in structure, but the left contained considerable quantities of pus. The left tonsil was emulsified under aseptic precautions, and the emulsion suspended in salt solution,

injected into three rabbits, varying quantities being injected intravenously. The first animal died of anaphylactic shock shortly after injection; the second died about eight hours after injection with every symptom of an overwhelming septicæmia, streptococci being isolated from the blood in great numbers. The third rabbit had been given a very small dose, and showed no noticeable symptoms until about two weeks later, when an inflammation of one of the joints developed. The following few days the animal grew gradually worse, and was chloroformed. There was considerable fluid in the pleural, peritoneal, and pericardial cavities, the latter containing a flaky deposit. The heart was dilated and flabby, and the mitral valve showed retraction and a small hæmorrhage. From the blood and serous fluids was isolated the *Streptococcus viridans*. Meanwhile, the day following extirpation of the tonsils, the patient complained of a severe pain over the right kidney. The urine, which had hitherto been normal, showed the findings of an acute hæmorrhagic nephritis. On cultivation a pure culture (anærobic) of a green-producing streptococcus was obtained, corresponding in every way to that obtained from the left tonsil. A vaccine was prepared and given at intervals of six days. After two injections the urine had again become normal, while the temperature gradually diminished.—Case 3: A girl, aged 18 years, complained of severe headache and pain in the left knee and over the heart. The patient had had attacks of pain over the heart previously, also headaches for some time, but had not before been troubled with "rheumatism." The knee was found to be slightly swollen and tender; there was a murmur over the apex; the pupils were considerably dilated. Temperature 101° F. Examinations of the teeth, tonsils, and nose were negative. She was referred to a specialist for examination of the sinuses, and these were found to be apparently normal. A daily inspection of the throat was made, with no results, until one day, when the patient said she felt somewhat better, a considerable quantity of greenish, thick pus was found to be discharging down the posterior pharyngeal wall. Cultures were made and a streptococcus was isolated, from which a vaccine was prepared. The patient began to improve after the first injection of the vaccine, and after five doses had been given she had apparently made a complete recovery.

T. R. Whipham.

The proper position of tonsillectomy in pædiatrics (*'Arch. of Ped.,'* 1915, xxxii, *p.* 817).—**Sanford Blum** discusses the *pros* and *cons* of conserving the tonsils and concludes that tonsillectomy is an excellent surgical procedure in certain cases and should be the operation of choice in malignant disease of the tonsils (a self-evident fact, one would think). It may be indicated in recurrent peritonsillar abscess. It should not be performed in infants. It should only in exceptional cases be performed before the eighth year. The author states that he has "proved by animal experiments that the tonsils are excretory organs for the cervical glands."

Macleod Yearsley.

Tonsillectomy as a therapeutic measure in the treatment of chorea and endocarditis (*'Boston Med. and Surg. Journ.,'* 1915, clxxiii, *p.* 356).—**J. H. Young** gives an analysis of fifty-four cases of rheumatism in which tonsillectomy was performed. His results do not give much support to the prevailing idea of the value of this measure in preventing recrudescences of the infection. In twenty-one cases of chorea there was a recurrence of the complaint after tonsillectomy in no fewer than twelve instances.

The value of the author's conclusions would have been much increased were we told exactly the type of operation performed and the degree of the infection of the tonsils as determined by their examination after removal.

REGINALD MILLER.

A case of prolonged intubation cured by introduction of a tube coated with alum (*'Rev. méd. de la Suisse rom.,'* 1915, XXXV, *p.* 454).—**H. Mallet,** a boy, aged 4 years, who had had faucial diphtheria twenty-one months previously, was admitted to hospital with pneumococcal laryngitis. He was intubated nine times in the course of 27½ days, during which he was without the tube for forty-two hours in all. Cure ultimately resulted from cauterising the subglottic ulceration by the introduction of a tube coated with a thin paste composed of alum, starch, water, and glycerine.

J. D. ROLLESTON.

Can the speech present a sign of congenital syphilis? (*'Boston Med. and Surg. Journ.,'* 1915, CLXXIII, *p.* 619).—**W. B. Swift** records three cases in children, two of whom were aged 10 years, and one whose age is not given, to show "that there is a voice sign in congenital syphilis which manifests itself in a harsh, rasping, monotonous, low-pitched voice that is only slightly, and usually not at all, amenable to treatment." Swift suggests that it is due to a maldevelopment of the vocal cords comparable to the maldevelopment of the upper central incisors and of the scapulæ characteristic of congenital syphilis. J. D. ROLLESTON.

Paralysis of the recurrent laryngeal nerve resulting from mitral stenosis (*'Journ. Amer. Med. Assoc.,'* 1916, LXVI, *p.* 333).—**J. Rosenthal.**—Paralysis of the recurrent laryngeal nerve can be caused in mitral stenosis by direct pressure of the left auricle, or indirectly through the pressure of the pulmonary artery, or the dilatation of the right ventricle may cause displacement of the heart with consequent dragging on the ligamentum arteriosum and strangulation of the nerve. Two cases are reported, one of which was a boy, aged 4½ years, who six weeks previously had rheumatic fever. Since then he had had cardiac symptoms and for one month had been hoarse. The heart was greatly enlarged and showed signs of mitral stenosis, and there was abductor paralysis of the left vocal cord. Death occurred ten months later. No necropsy was obtained.

T. R. WHIPHAM.

Tracheitis sicca (*'Lancet,'* 1915, II, *p.* 1351).—**H. Lambert Lack,** at a meeting of the Royal Society of Medicine, section of laryngology, showed a case of tracheitis sicca. The patient, a boy aged 7 years, had suffered for five weeks from stridor and dyspnœa, for which no cause could be found. When examined the lumen of the trachea was almost filled by a mass of large black crusts. The larynx was natural, the voice was good, and there were no crusts in the pharynx or nose, although the latter was rather wide with a tendency to dryness. Treatment by steam inhalations had no effect; marked cyanosis and dyspnœa continued. Small doses of potassium iodide were then given, and the throat was sprayed with Siegle's steam spray. Great improvement resulted, the stridor and dyspnœa disappeared, although crusts were still present. The cause of the rare condition was quite obscure. J. ALLAN.

Foreign body in bronchus (*'Edin. Med. Journ.,'* 1915, II, *p.* 417).—**J. S. Fraser** reports the case of a boy, aged 4 years, who four months before

swallowed a pearl-headed pin. A radiograph located the pin in the right bronchus, its head being downwards. It was removed with difficulty by direct bronchoscopy. Three days later tracheotomy had to be done because of urgent asphyxia, and during convalescence the child developed dulness over the right apex, probably due to collapse of the lung. The author remarks that the larynx of a child is very small, and appears to be specially liable to œdema and spasm. He thinks it would have been better in this case if tracheotomy had been performed in the first place. This would have permitted the insertion of a larger bronchoscopy tube, and would also have brought the site of the foreign body considerably nearer the operator. The size of the tube to be used in bronchoscopy is regulated by the width of the glottis, and not by the size of the bronchus. If a tube can pass through the glottis it can enter the main bronchus. J. Allan.

School Hygiene.

The nutrition of the school-child (*'Journ. State Med.,'* 1915, xxiii, *pp.* 329 and 353).—**G. A. Brown.**—The average daily energy value of all the diets studied gave 3163 calories. The average composition of all the diets was 110 grm. of protein, 83 grm. of fat, and 473 grm. of carbohydrates, The principal food-stuffs used were bread, potatoes, milk, sugar, beef and vegetables. The cheaper vegetable foods, such as oatmeal, peas, beans, etc., were used in relatively small amounts. Of all the families whose weekly income was over 20*s.*, 28·5 per cent. had a diet the energy value of which was less than the minimum of 3000 calories. Of the families whose weekly income was under 20*s.* or irregular, 82·5 per cent. had a diet of which the energy value was less than 3000 calories. Not one of the families in which the wage was regular and below 20*s.* per week had a diet the energy value of which reached the minimum of 3000 calories. The author has endeavoured to bring out the following points: (1) That the condition of the mother, respecting nutrition and general health during pregnancy, has a far-reaching influence on the nutrition of the child; (2) that antenatal causes of defective nutrition may act for an indefinite period after the birth of the child; (3) that the industrial occupation of the mother has a detrimental effect on the nutrition of the children; (4) that housing is related to the state of nutrition of the child. The children from the largest houses are, on the average, heavier and taller than their less fortunate fellows. The poorest children suffer most in nutrition and growth; (5) that the smaller the house the larger is the proportion of persons per room. (*a*) The proportion of children in one- and two-roomed houses exceeds the proportion of adults. (*b*) In the three-roomed houses the proportion of children to adults per room is equal. (*c*) And in houses of four or more apartments the proportion of adults exceeds that of the children per room; (6) that the average wage among the 770 families for which reliable returns were obtainable was 20*s.* 9*d.* per week, or 3*s.* 4*d.* per head per week to an average family of six persons. This works out at approximately 5*d.* per head per day after deducting rent; (7) that while the labouring classes with a regular income distinctly over 20*s.* per week generally managed to secure a diet approaching the proper standard for active life, those with a smaller income, as well as those with an irregular income, failed to get a supply of food for the proper development of the body or for the maintenance of the capacity for active work.

J. Allan.

The importance of the medical supervision of older children (*'New York State Journ. Med.,'* 1915, xv, *p.* 67).—**E. J. Wynkoop** thinks too much stress cannot be laid upon this important matter, for nothing has such a bearing on the future welfare of the children as their proper supervision and inspection, and the early and prompt correction of those processes which tend toward mental dulness and physical enfeeblement. The author takes that period in the child's life between the ages of ten and fourteen, or, in other words, those years leading up to puberty, and briefly refers to some of the mental and physical anomalies that may arise at this period of life. The advantages to be gained by the medical supervision of older children are many, but the special points that seem to be uppermost are these: First, with the advent of the medical inspection and examination of school-children it is going to be possible to get in closer contact and keep under medical supervision a certain proportion of these children. Second, it is going to enable us to keep a closer observation of the growing boys and girls and will bring home to the parents as never before a realisation of the importance of making it a business to keep their children well. Third, by starting a closer relationship between the children and their physicians, it will give the physician many opportunities to advise parents in regard to the needs of their children. J. Allan.

School medical inspection and the British Army (*'Lancet,'* 1915, II, *p.* 332).—**G. Finch** and **C. W. Hutt** discuss the causes of rejection to the British Army, and try to show how school medical inspection may help to reduce the numbers of such rejections in the future. They consider most of the causes of rejection as falling into two main groups, each of which accounts for about one-third of the total rejections from all causes. Group 1: Conditions generally associated with inferior physique, comprising under chest measurement, under weight and height, diseases of the heart other than valvular diseases, impaired constitution and debility, flat foot, and malformations of the chest and spine. It is certain that a great reduction in the above defects would result from more thorough medical supervision and treatment of public elementary school-children, combined with arrangements for suitable exercise and adequate feeding. Group 2: The second large group of defects, causing one-third of the total rejections, consists chiefly of surgical diseases which are in great part amenable to treatment, especially if dealt with during school-life. Under this head the authors include loss and decay of many teeth, defects of vision and external eye diseases, diseases of the middle ear and deafness, hernia, and diseases of joints. The authors think it is impossible for the School Medical Service to cover all the ground, and they hope for a Public Health Medical Service, which would link itself with, and in part supersede, the existing public health and other organisations which already administer the inspection of midwives, the notification of births, the baby clinics and schools for mothers, school medical inspection, and the work of the factory surgeon. Medical officers of such a Public Health Medical Service would be offered work of considerable variety and interest, with a correspondingly increased power to improve the national physique. J. Allan.

Responsibility and opportunity of the teacher in preventing tuberculosis (*'Boston Med. and Surg. Journ.,'* 1915, clxxiii, *p.* 239).—**T. F. Harrington** emphasises the difficulty of diagnosis in children. There were 2131 contacts among children of school age, in only eleven of whom

was the diagnosis of tuberculosis confirmed. Five per cent. of all children are below par, and it is among these that the preventive work must be done. Systematic teaching in physiology and hygiene is required, but owing to the bad training of the teachers this rarely amounts to much. The heating and ventilating arrangements of schools should be fixed by law, open-air classes should be established. Physicians and teachers should receive proper training. CHRISTOPHER ROLLESTON.

The aural school-clinique (*'Glasg. Med. Journ.,'* 1916, I, *p.* 101).—**J. K. Love** considers the advent of the aural school-clinique is perhaps the most important development which has taken place in the treatment of ear disease for the last quarter of a century, because, apart from deaf-mutism and tubercular disease, there is little ear disease amongst children till the beginning of the school period. Nearly all the middle-ear disease of later life, both suppurative and non-suppurative, commences during the earlier years of the school period. The author describes the arrangements in Glasgow for dealing with such cases, and advances the following conclusions as the result of four years' experience: (1) The treatment of middle-ear suppuration in school-children at aural school-cliniques is very satisfactory; (2) the results will be better when the post-nasal space can be attended to in all cases of middle-ear suppuration; (3) syphilitic deafness is not common in school-children; (4) as a minor but still important result of treatment, it should be noted that the teachers of the schools have offered spontaneous testimony to the improvement in educational progress which has occurred.
J. ALLAN.

Reviews.

TUBERCULOSIS: A GENERAL ACCOUNT OF THE DISEASE, ITS FORMS, TREATMENT, AND PREVENTION. By A. J. JEX-BLAKE, M.D., F.R.C.P. London: G. Bell & Sons, Ltd., 1915. Pp. 231. Price 2s. 6d. net.

A SUCCINCT but very complete account of the chief facts appertaining to tuberculosis will be found in this book, which is written in plain language, free as far as possible from technicalities, so as to be intelligible to those who have no special education in medical or scientific matters. Its purpose, we presume, is to serve as a kind of text-book for lecturers and others connected with anti-tuberculosis campaigns, and, viewed from such a standpoint, the book is an undoubted success. Dr. Jex-Blake gives all the information that a layman is likely to require, and here and there perhaps just a little more, which will only serve to arouse the interest of the intelligent reader without going to the length of boring him by being too abstruse.

The author begins with an historical survey of the disease from the earliest times, and then deals with the various forms of tubercle bacilli and the pathological lesions produced by them. Predisposition and immunity to tuberculosis and the paths of infection are judicially discussed, and the statistical side of the question is lightly touched upon. Next follows a description of tubercle as it affects the lungs and other parts, and here we must make just one criticism. Dr. Jex-Blake includes erythema nodosum

among the tuberculides; but in spite of the doctrine of Landouzy and the observations of Chauffard and Troisier, Marfan, Sézary, and others, we doubt if the association between the disease in question and tuberculosis is generally accepted in this country. Diagnosis is only dealt with in a general way, the details of clinical examination being obviously beyond the scope of the work. The chief points as regards prognosis are given, but more stress is laid on the general treatment of the disease. Here the writer gives some sound information as to the principles upon which consumptive patients are treated and the management of such cases in sanatoria, though we fear that the lay reader will be somewhat bewildered by the account of the different tuberculins and the more or less mystic letters which are usually employed to designate them. The concluding chapter is on the prevention of tuberculosis, and will appeal perhaps most of all to the general public. In it Dr. Jex-Blake sets forth very clearly the means which should be employed to prevent the spread of the disease, and enters a plea for the co-ordination of the various authorities which have to deal with it.

The book is written in an admirable style, and one well suited to its purpose. We can thoroughly recommend it to all who are on the look out for a plain, straightforward account of the "great white scourge."

T. R. W.

Education in Victoria: Report of the Minister of Public Instruction for the year 1913–14. Pp. 53 and 127. Illustrated with photographs. 1915. By authority: A. J. Mullett, Melbourne.

This is a long Parliamentary Report, with still longer additional appendices, which deals chiefly with the administrative side of the question of education in the province of Victoria. Appendix O is a report on medical inspection and kindred subjects, and from it we learn (p. 106) that in the High Schools a considerable number of girls at the age of puberty, who are undoubtedly over-working and having insufficient sleep, are the subjects of enlarged thyroids, often to a very definite degree.

To those interested in education and the statistics of the health of a large number of school children the Report will be useful. T. R. W.

Staffordshire County Council: Annual Report of the School Medical Officer for 1914. Pp. 126. 1915. Stafford: J. & C. Mort, Ltd.

This little volume, in addition to the usual report on the methods of medical inspection of a large number of school children, gives some interesting information on school diseases needing special care, and a number of commentaries on various physical defects. Among the latter, special mention must be made of a valuable paper (for it really amounts to that) on "Defects of Speech and the Principles of Treatment," by Dr. J. Priestley. "Mouth-Breathing," by Dr. Ruby Thomson, and "Seborrhœa," by Dr. Agnes H. Nicoll, are also important contributions.

Dr. Priestley, the Senior Medical Inspector, is responsible for the Report this year, and is to be congratulated on the attractive form in which the results of the useful work done by him and his assistants are presented.

T. R. W.

Rutland County Council Education Committee: Annual Report of the School Medical Officer for the year 1914. By Christopher Rolleston, M.A, M.D.Oxon., M.R.C.P.Lond. Pp. 47. Leicester: W. Thornley & Son.

This is a clear and comprehensive report on the schools and school children in the County of Rutland, and reflects considerable credit on the assiduity of Dr. C. Rolleston. The author is of opinion that enlarged tonsils and adenoids account for nearly 30 per cent. of the cases of malnutrition examined, and are frequent causes of deficient hearing, otorrhœa, and serious mental retardation. One case only of congenital syphilis was met with, and it is interesting to note that the writer states that he has only seen one other case of this disease in Rutland. Towards the end Dr. Rolleston does not hesitate to make some scathing remarks as to the hygienic conditions found in some of the schools. T. R. W.

Mothercraft. Parts I and II. Pp. 322 and 165. London: The National League for Physical Education and Improvement. 1916. Price 4*s.* 6*d.* net.

This is a very useful series of lectures delivered to health-visitors and others under the auspices of the National Association for the Prevention of Infant Mortality. They comprise nearly everything with regard to infant welfare that such workers require to know, and are written in a plain, straightforward manner which carries conviction and impresses the essential points upon the reader. The lectures were given by well-known men and women and have authority from the fact that the writers have made a special study of their subjects. Thus, to mention only a few of the authors, Dr. Amand Routh writes on the health of the unborn babe, and Miss M. Fitzgerald on the visiting of homes. The feeding of infants is dealt with by Dr. F. Langmead, Dr. E. Pritchard, and Dr. H. C. Cameron; simple ailments by Dr. R. Carter and Dr. D. Forsyth; eye diseases by Mr. S. Stephenson; ear troubles by Mr. Macleod Yearsley; infectious diseases by Dr. J. D. Rolleston; monstrosities by Dr. A. Keith.

In Part II the lectures comprise an advanced course, some of the subjects being the Development in Utero (Mrs. F. Willey), Dietetics (Miss E. Mecredy), Infectious Diseases (Dr. H. Cuff), the Organisation of Schools for Mothers (Miss E. V. Eckhard).

Some examination questions and answers are also given in an Appendix.

The book is eminently suited for its purpose, and we can thoroughly recommend it to all lay workers. T. R. W.

Economy in War-Time. By Mrs. Eustace Miles. Methuen & Co. Price 1s. net.

This little book contains 160 recipes for vegetarian dishes and several model menus, also suggestions for invalid and children's diets. Mrs. Miles wisely does not disparage the use of meat, only its abuse. For the sake of variety as well as of economy this manual will be welcomed by the mistress of the middle-class home. L. A. F.